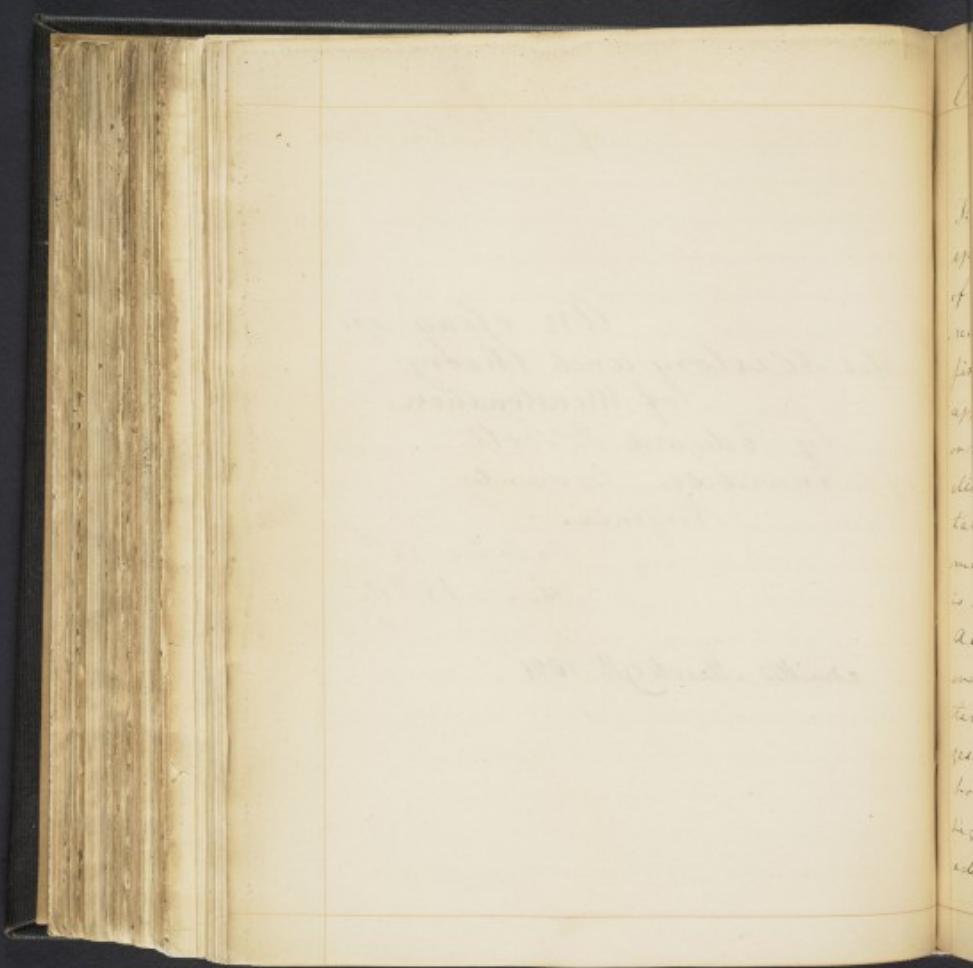


N. 12

An essay on  
the History and Theory  
of Menstruation,  
by Edward P. Scott.  
of Dinwiddie County  
Virginia.

October 25<sup>th</sup>  
A.D. 1820.

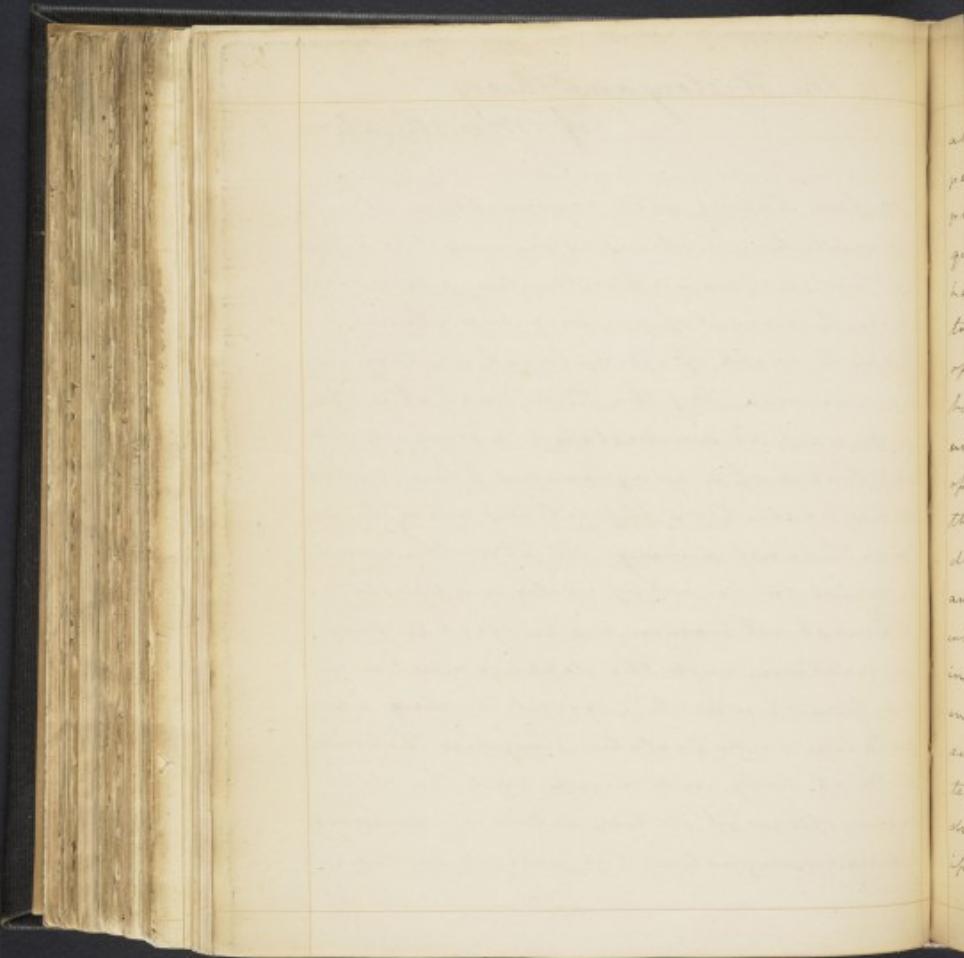
admitted March 9<sup>th</sup> 1821



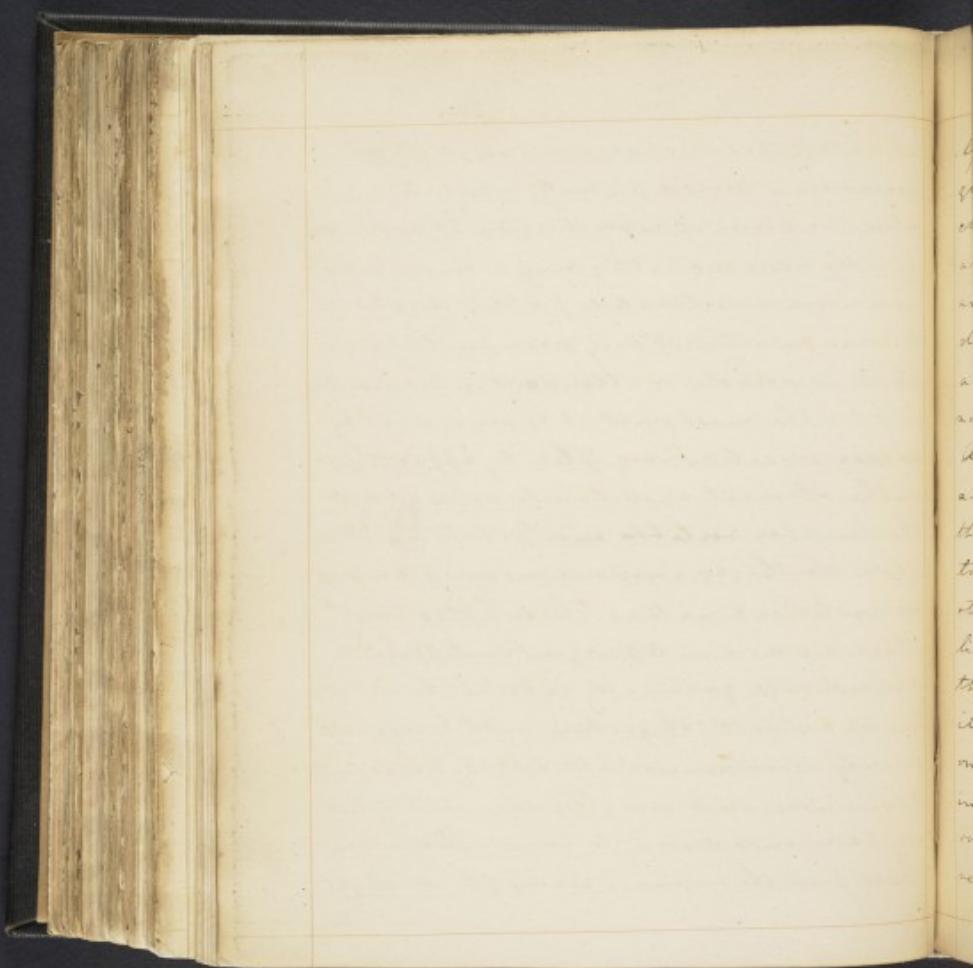
## On the History and Theory of Menstruation.

Before taking into consideration, the speculative notions, as regards, the cause of this curious and interesting phenomenon; I deem it of primary importance, first, to speak of its natural history, and appearance. By the term menstruation, or menses, we understand, a periodical discharge of a sanguineous fluid which takes place from the uterus, every lunar month; and during its flow the woman is said to be out of order, or unwell.

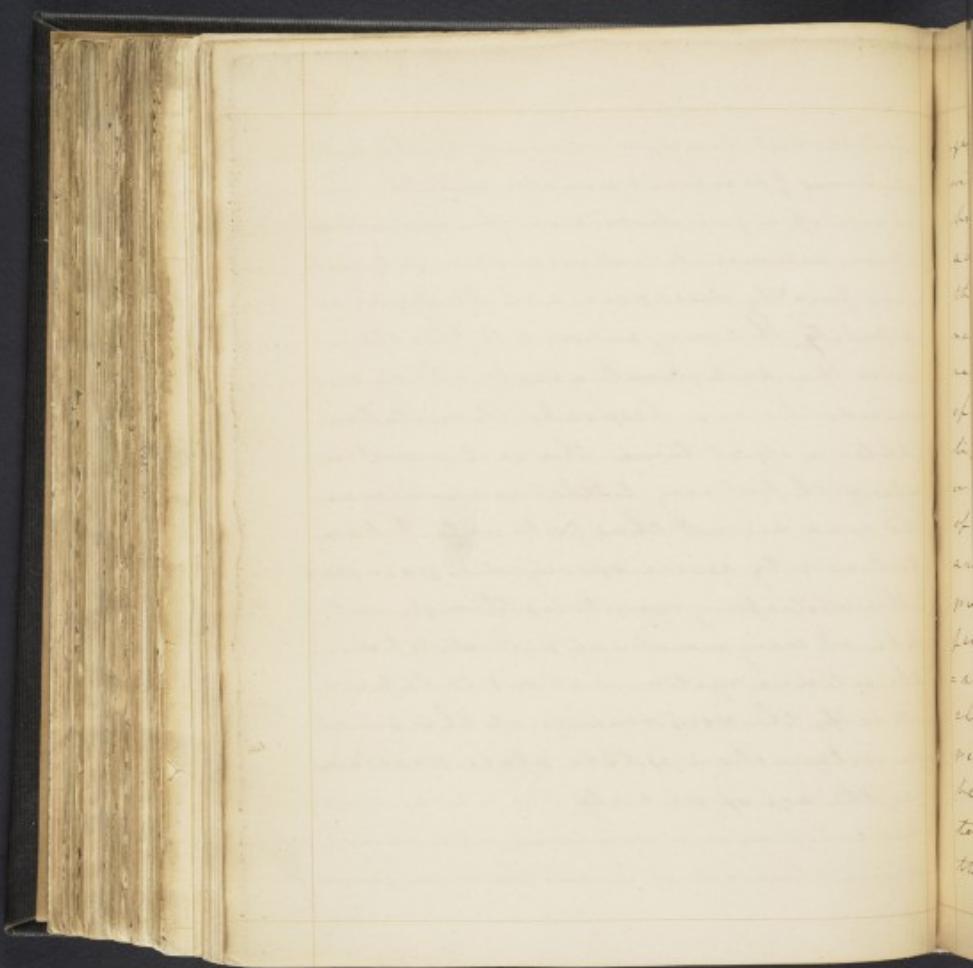
Almost all women, are subject to this evacuation, and the derangement, or retention of which, (except during uterine affection and lactation) impairs the health both of body and mind, and the still higher office of its destination is - suspend *et viz* impregnation. The period of life



at which this discharge makes its first appearance, is termed puberty, which term implies the power of reproduction. It most unfrequently happens with young women, who have never menstruated, for this discharge to come on without any premonitory signs of its approach, or attendant disposition; but for the most part, it is preceded by uneasy sensations, very often by affections of the stomach and bowels, pain about the lumbar vertebrae and pelvis, traveling down the thighs, and various symptoms of an hysterical nature. These affections, which are more or less urgent in different individuals, gradually subside; but at the end of a month, they return with increased severity, accompanied with colicky pains, quick tense pulse, and now and then with a hot dry skin, and desire to vomit. There now issues from the vagina, a serous fluid slight-

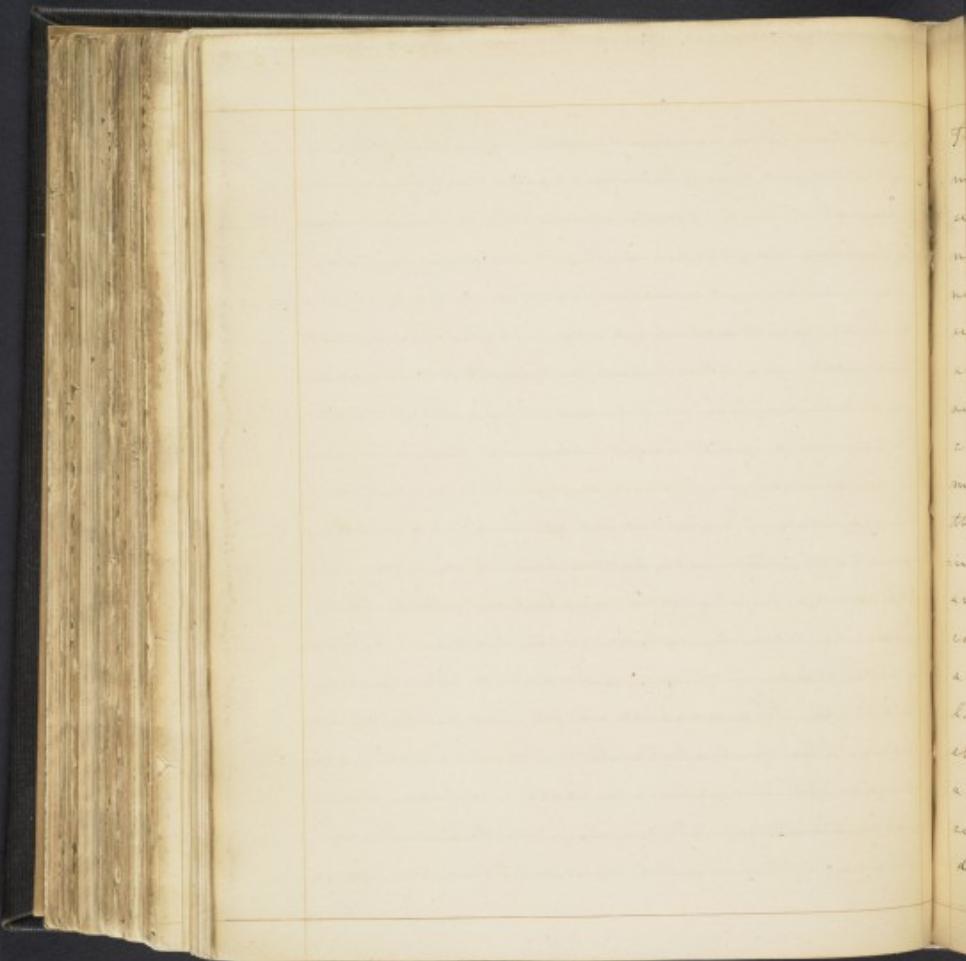


by nests, but does not become perfectly sanguinous for several periods. After the discharge of a few drops, even, the symptoms above enumerated diminish in intensity and finally disappear; a slight degree of debility tho' may succeed to this stage, and the dark purple areola which surrounds the eye, bespeaks its visitation. After a short time, the girl menstruates, with but very little inconvenience, tho' some are not thus fortunate, but are tortured by severe spasmodic pains and other distressing symptoms through out life at every menstrual period. When the uterine system is about to take on its self, the performance of this function, certain changes take place proclaiming the age of puberty. The uterus and ovaria become more developed, and finally receive their adult form; the vaginal canal

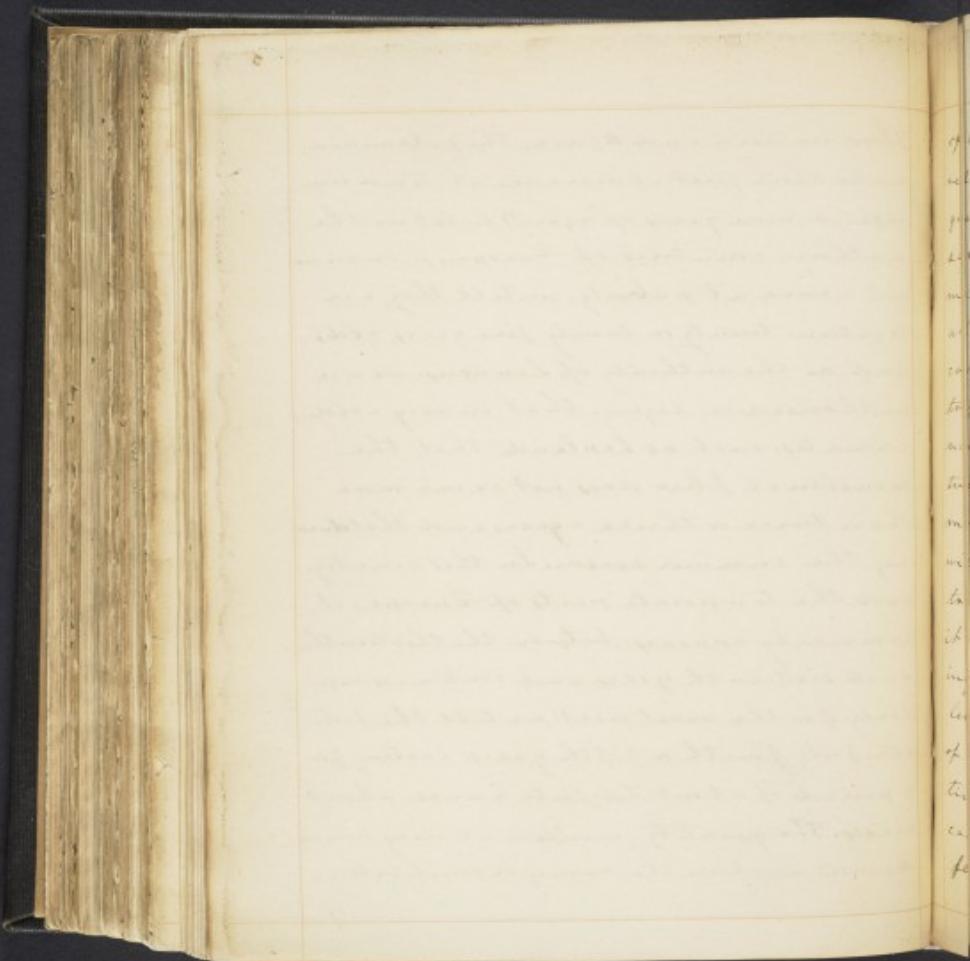


ges; the mons veneris swells up, and is covered with hair; the glandular substance of the breast is engorged; and the cellular and adipose part increased; at the same time the mental functions become more vigorous, and new vapors assert their sovereignty over the female heart. The varieties of constitution, of climate, and mode of life, have great influence on the earlier or later manifestation of this phenomenon of puberty. There seems to exist a very strong analogy derived from the vivifying impulse of heat upon vegetables, and the female constitution with respect to menstruation, for in general, the warmer the climate, the earlier will the menses appear. The inhabitants of tropical climates, begin to menstruate long before, and terminate much earlier in life, than those who dwell in northern regions.

Thus,

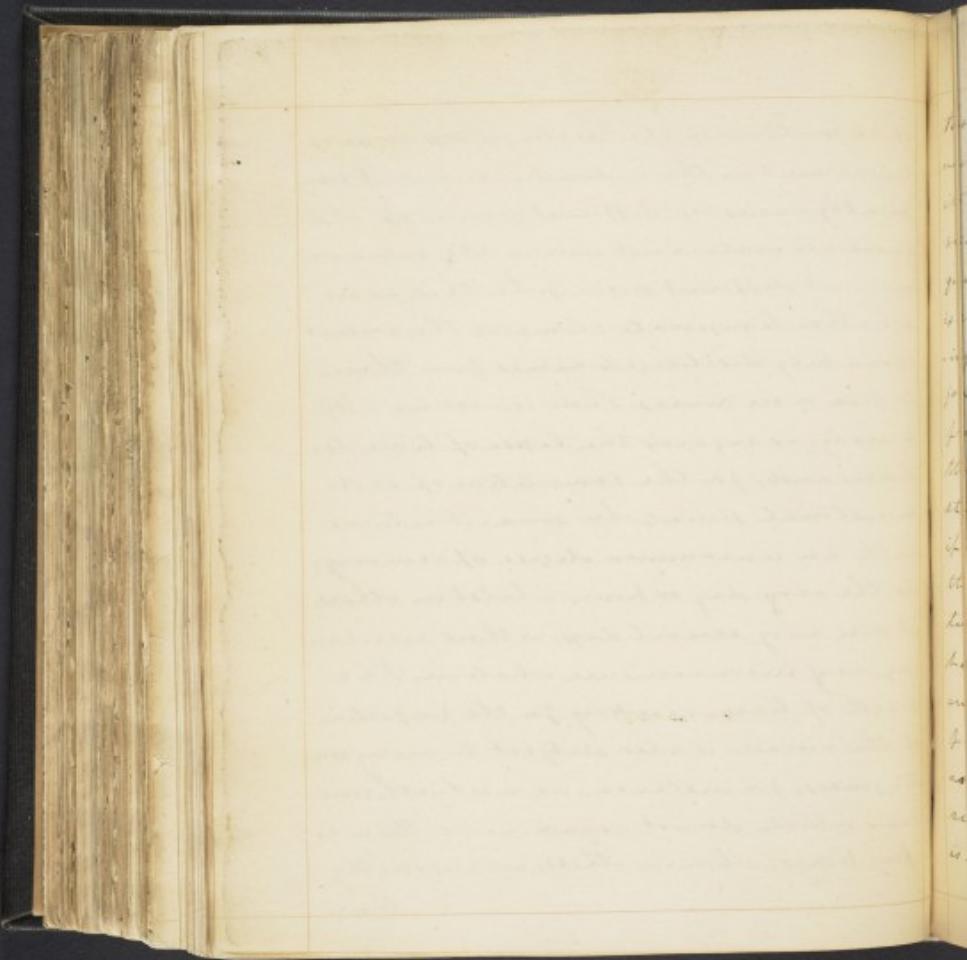


Thus, in Asia and Africa, the calamina make their first appearance at ten, or even eight or nine years of age. Whilst in the northern countries of Europe, women do not arrive at puberty, until they are eighteen, twenty or twenty five years old; and on the authority of Linnaeus, we are authorised in saying, that in very cold climates, such as Lapland, that the menstrual flux does not occur more than twice or three a year, and that during the summer season. In this country, and the temperate parts of Europe, it commonly appears, between the thirteenth and sixteenth years, and continues regularly, for the most part, until the forty fourth or fifth years, lasting for a period of about tricentum annos, when it ceases. The quantity emitted at every period depends much on the variety of constitution.



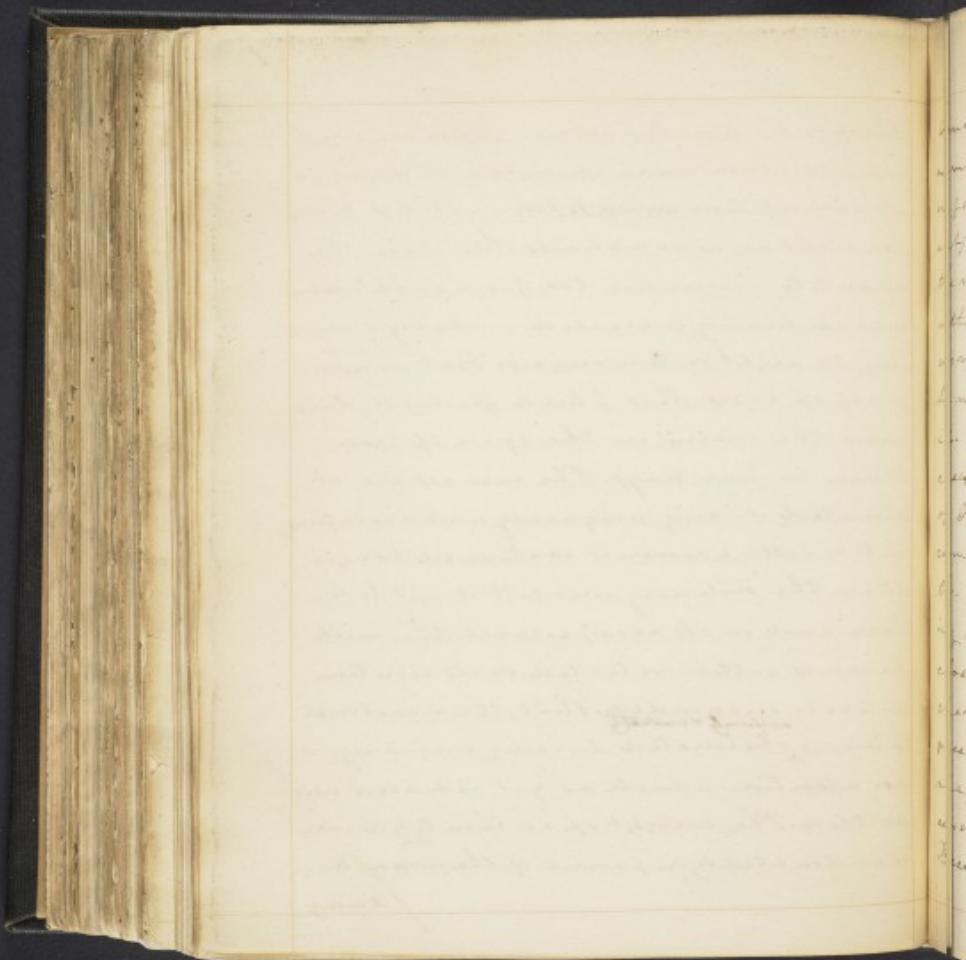
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of climate, and the greater or less degree of refinement in the individuals but it frequently varies in different women of the same climate, and even in the same woman at different periods. In this, as in all other temperate climates, the amount commonly discharged, varies from three to five or six ounces. There is, also, no little variety, as regards the lapse of time between, and, for the completion of each menstrual period. In some, it returns with an uncommon degree of accuracy, to the very day or hour, whilst in others, it may vary several days, without occasioning any inconvenience whatever. The length of time, necessary for the protraction of the periods, is also subject to many contingencies, for instance, we meet with some cases which do not require more than a few hours, when in others, and especially those



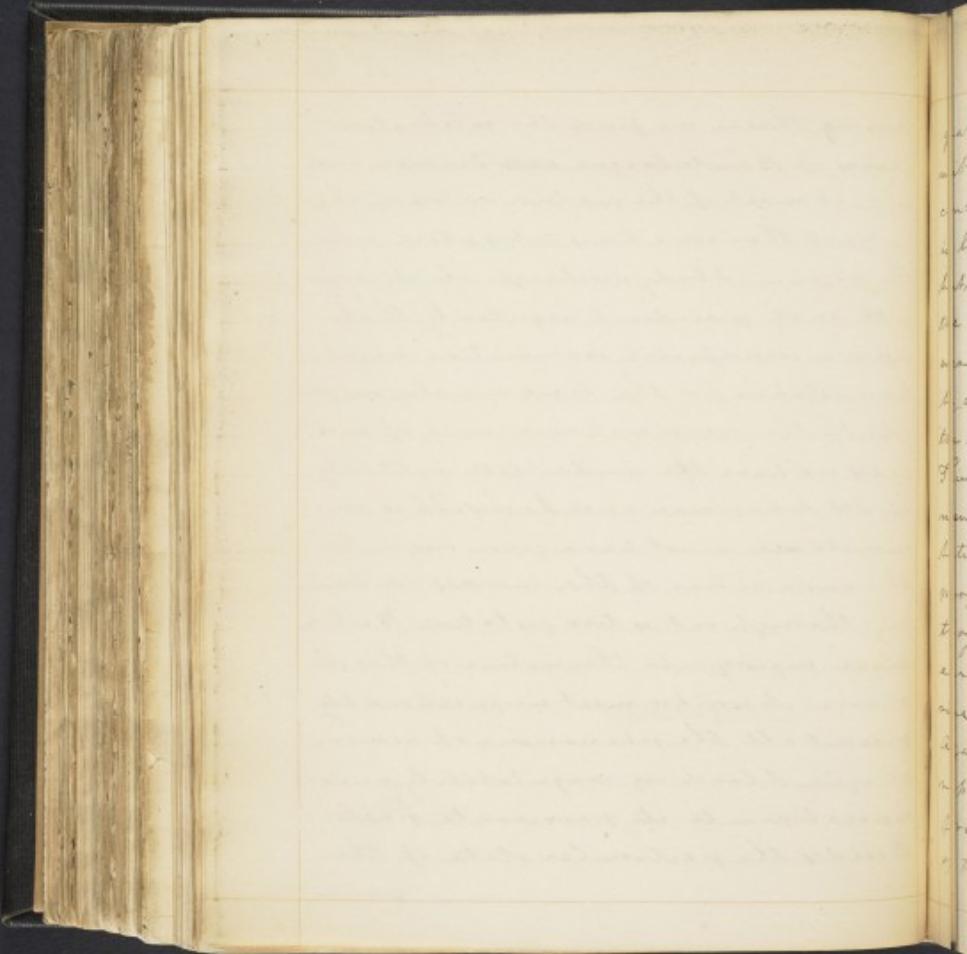
those who live luxuriously, and are confined, to close warm chambers, demand for its removal two consideration, not less than six, eight and sometimes ten days; the quantity evacuated too, from such women is considerably increased, probably amounting to eight or ten ounces. But in a majority of cases, this fluid gradually kills from the uterus, in the space of from three to five days. The menses, are obstructed during pregnancy and lactation; if the latter however, is continued longer than the ordinary period, it is apt to return, and on its reappearance the milk becomes either white, or its secretion entirely suspended. That, the menstrual flux, is obstructed during pregnancy, is an assertion which as yet remains unsettled. The weight of authority however, is undoubtedly in favour of the proposition.

Among



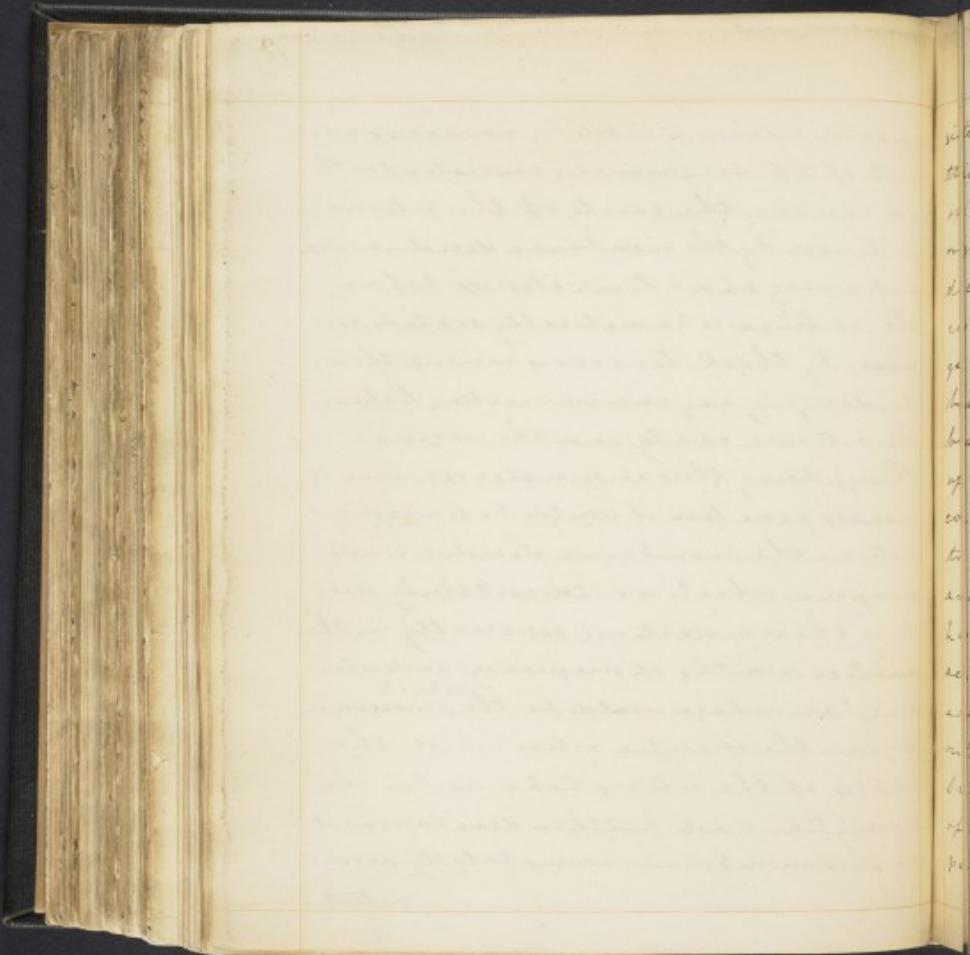
Among these, we find the celebrated names of Bande laogue, ~~and~~ Denman and in fact most of the modern writers on the subject. This sometimes takes place from the vagina, a bloody discharge, which occurs with such periodical regularity, that upon a superficial examination, might be mistaken for the true menstrual flux. Of the occasional recurrence of such cases we have the undoubted authority of Drs Leeksman and James. This circumstance, must have given origin to the supposition of the monthly continuing through out utero gestation. But on close inquiry into the nature of this discharge, it would most unquestionably present all the phenomena of hemorrhagic blood, viz. coagulability, and separation into its proximate parts. Besides the particular state of the

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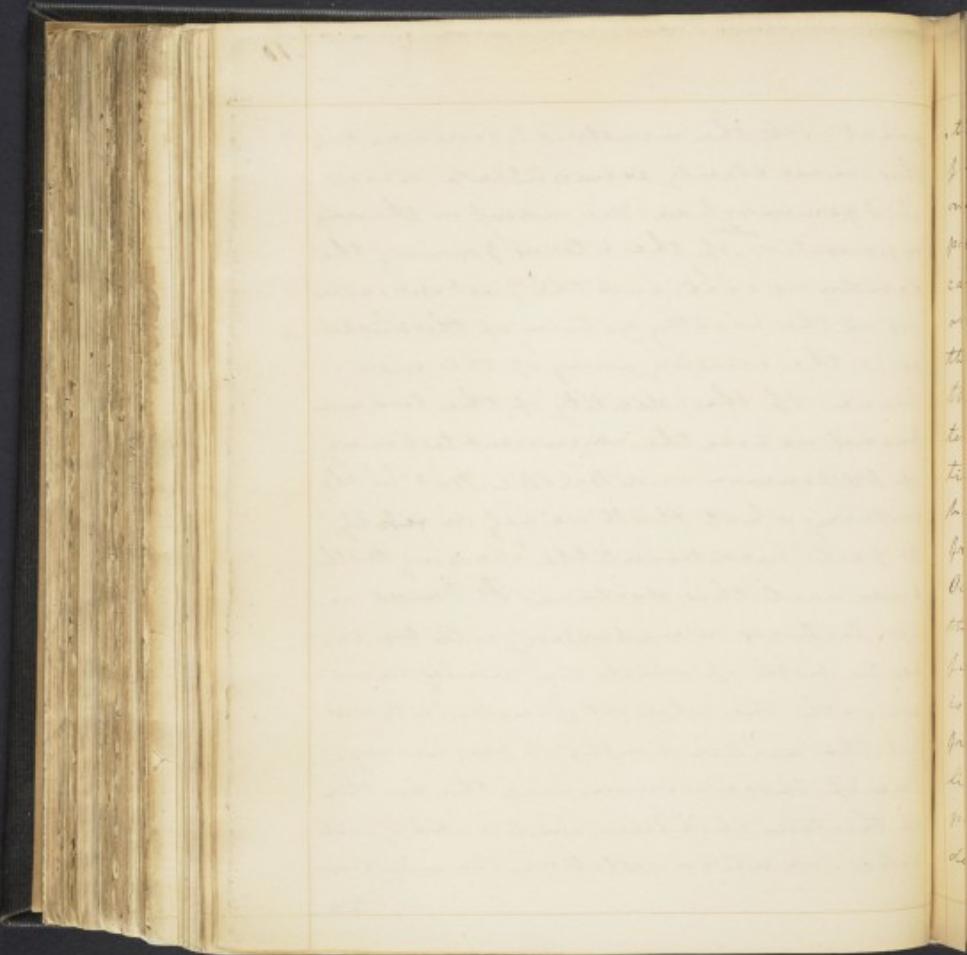


gravid uterus, would by no means admit of its recurrence, coexistent with conception, the cavity of the uterus is lined by the membrana decidua, and but a very short time elapsed before the os uteri is hermetically sealed, as it were, by thick tenacious mucus, thereby denying any communication between the uterine cavity and the vagina.

Things being thus circumstances, were the menses secreted, it would be pressed out between the membrana decidua and propria, which would certainly destroy the connection (especially in the earlier months of pregnancy) and acute-<sup>inflamed</sup> hemorrhage would be the consequence again, the specific action which the vessels of the uterus take on for the formation and further development of this membrane, being totally inconsistent

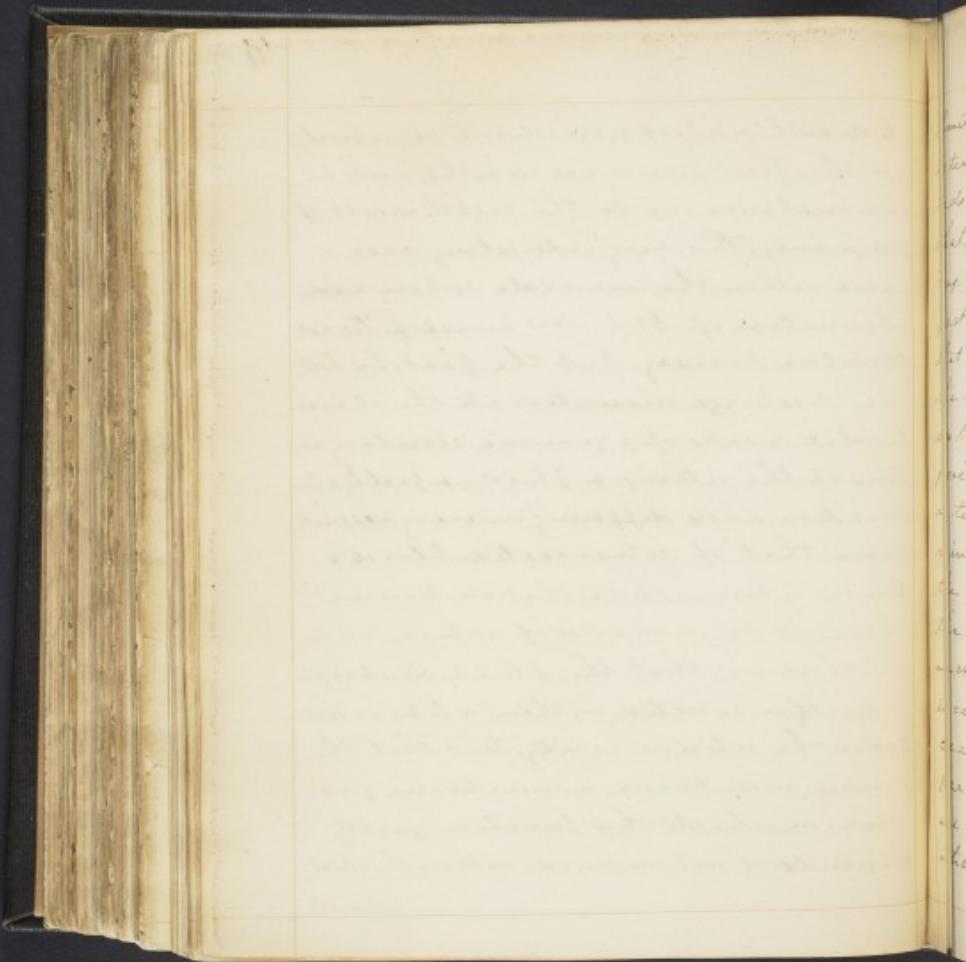


sistent with the menstrual secretion. So, this we see clearly exemplified, in cases of Dymenorrhœa, dependent on the way or manner <sup>at</sup> of the uterus forming the deciduous coat; and the first appearance of the healthy return of this discharge is the coming away of this membrane. Of the identity of the two membranes, we have the concurrent testimony of Dr Denman and Baillie. But on the contrary, what shall we say in respect to facts, incontrovertible opposing both and nail this doctrine. Dr Denys, in his lectures on midwifery, cites two cases, in both of which the menses recurred with the almost punctuality that out the earlier months of pregnancy; one of those women, was, the mother of thirteen children, and during each period of intra gestation, she menstruated



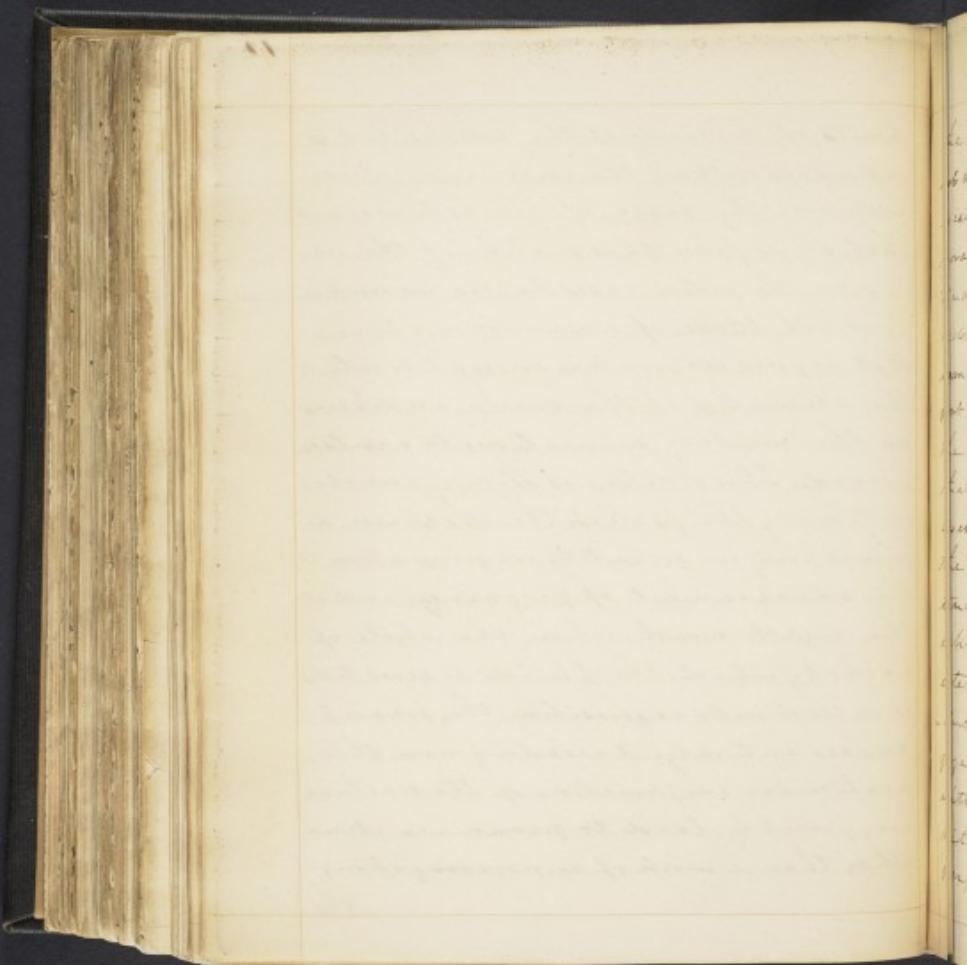
toed with perfect periodical regularity for the first five or six months, and in one instance, up to the eighth month of pregnancy. This, very interesting case, came within the immediate sphere and observation of Dr. Jewell himself, 'tis not therefore hearsay but the fact. In both, the discharge presented all the characteristic marks of a genuine secretory action of the uterus, a fluid perfectly clear & colorless, and differing in every respect from that of extravasated blood.

Our res. q. here will be, that we believe these to be anomalies of nature; and furthermore, that the fluid discharged is neither secreted within, or liberated from the uterine cavity. But that, the lining membrane, or membrane propria, on which this function greatly depends, is not confined within the uterine



limits of the cavity of the uterus, but is extended without the cervix, and reflexes over the verge of the os uteri. and that, it is from this portion of the uterus, in the earliest days before us, and in fact all those of a similar nature, that regains its wonted susceptibility to the stimulus of the ovaria, and keeps up the monthly evacuations to a certain period. This position is strongly corroborated by the facts of the discharge diminishing in quantity in proportion to the advancement of pregnancy; and at the eighth month, when the whole of neck (by which the fluid is secreted) is called into requisition the process ceases entirely. Exceeding now, this particular conformation of the womb we are forcibly led to pronounce it, no other than a work of supererogation;

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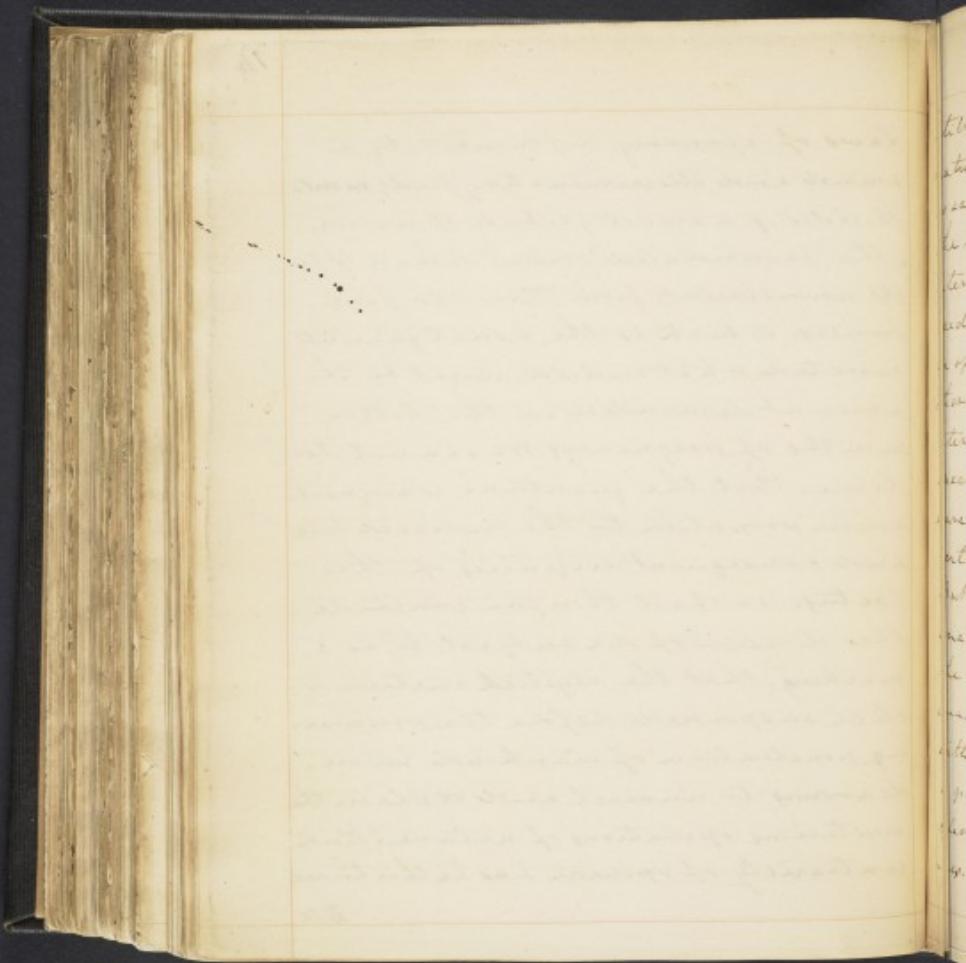


the end of menstruation being perfect  
ab viz conception, there would seem to  
exist no further demands for the elar-  
oration of this fluid. But it is con-  
tended by some, that far from being pa-  
recb, that the menstrual blood, is, in  
some way or other necessary for the sup-  
port of the fecundated ovum; if this be  
the fact can we presume for a moment  
that nature would be so blind in her  
operations as to direct a passage for  
the escape of that which was in-  
tended and destined, for the nour-  
ishment and growth of the fetus in  
utero. By adverting to the humblest mo-  
dus of her hands, as well as those  
gigantic fabrics, which are embraced  
within the three kingdoms of the ha-  
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perfect obedience, to the strictest

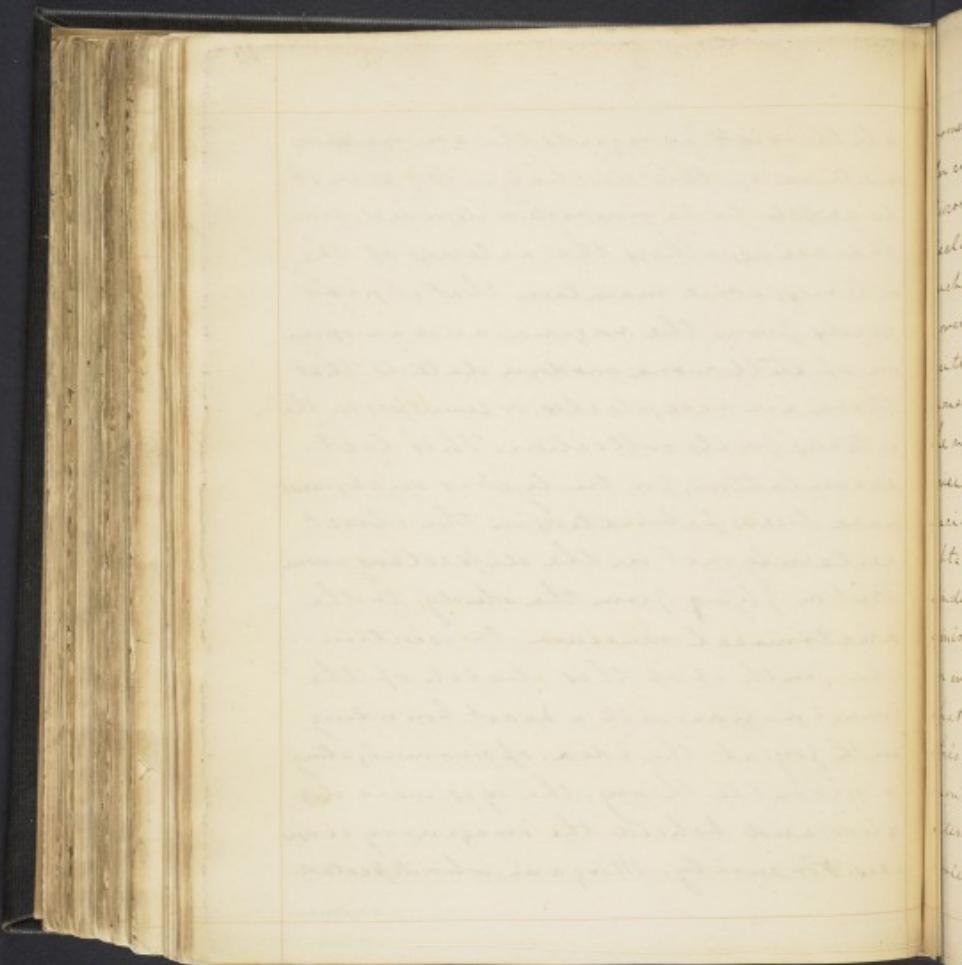
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laws of economy, influenced by a sound and discriminating judgment. Besides, if a small globule of matter, (the fecundated ovum) demands for its nourishment, from three, to five ounces, which is the usual quantity secreted, what indeed, must be the amount demanded in the latter months of pregnancy? We can not believe, that the quantum, is augmented, in proportion to the increased bulk and consequent exigencies of the foetus. We shall therefore, conclude this division of our subject, by remarking, that the mystick curtain is still suspended, before the presuming penetration of mankind, in endeavouring to unravel and explain the mysterious operations of nature. Much contrariety of opinion, has hitherto



still exists, as regards the source and  
nature, of this discharge. By some it  
is said to be <sup>ut</sup> derived from  
the veins, others the arteries of the  
uterus; some maintain that it pro-  
ceeds from the vagina; and an opinion  
of still more modern date, is that  
there are receptacles, or sinusses in the  
uterus for its collection. This last  
speculation, for truly, it is such, must  
have been fabricated in the closet,  
certainly not in the dissecting room.  
But on flying from the study, to the  
anatomical museum, to ascertain  
the truth of this stretch of the  
imagination, with a heart bounding  
with joy, at the idea, of promulgating  
a probable theory, the eyes were de-  
voted and beheld the imaginary sinu-  
ses. For surely, Morgani, who dissected  
woman



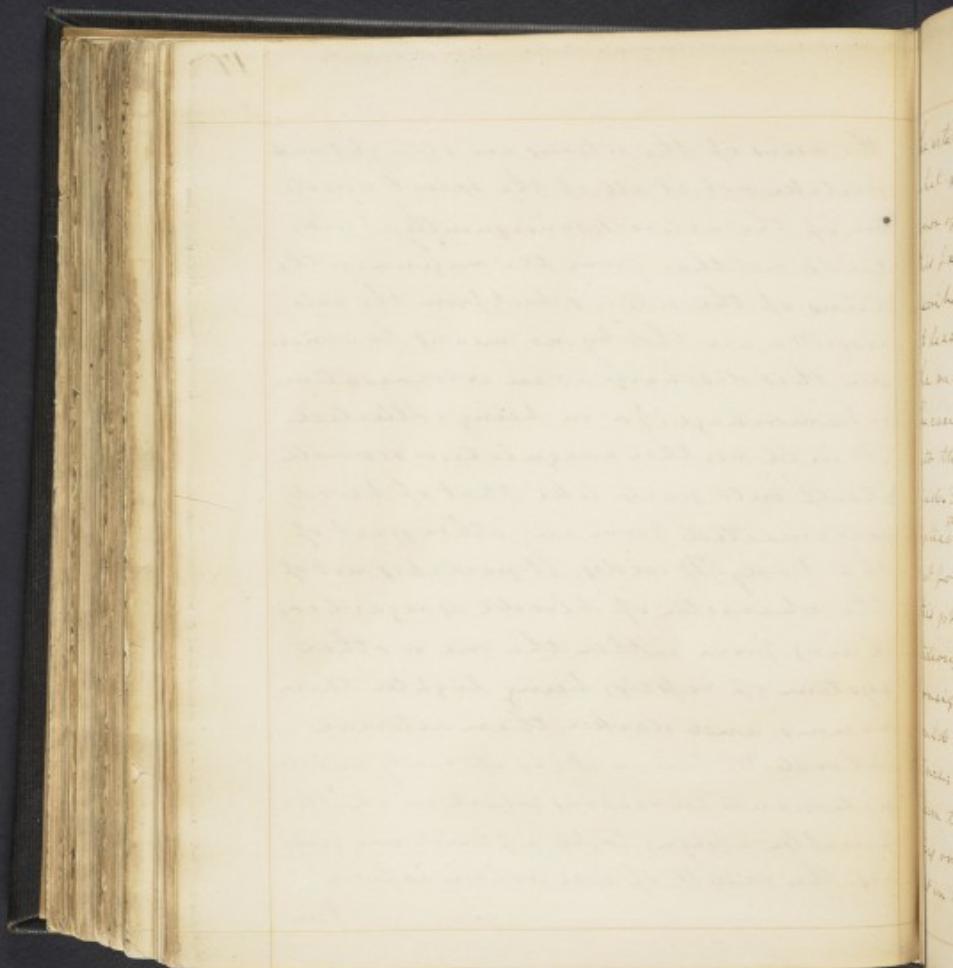
women at every stage of life, and under circumstances so propitious to the discovery, would have some where met, declared, and recorded (if it existed) such an organization of the parts. We however, see or hear of no such thing; neither has subsequent experience demonstrated their existence. If from the vagina, or by does, an obstruction arise, dependent on diseased uterus, especially scissibus? These certainly can obtain, no good reason for its absence under such circumstances, if this be opinion be true. But we have still stronger evidence against it. Dr. Hunter declares, that in a case of inversio uteri, he saw this fluid to exude or distill from the mouths of the tortuous vessels of the uterus; these are unequivocally the arteries, for all anatomists allow that

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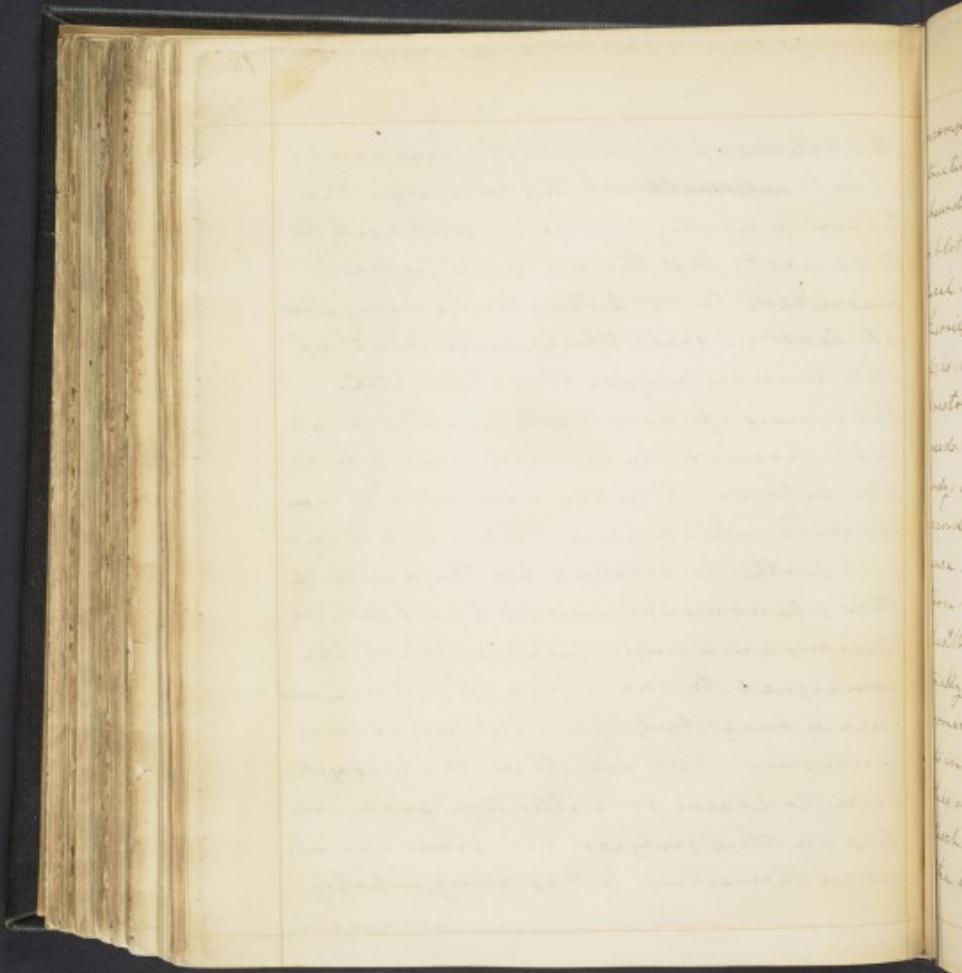
the veins of the uterus are straight and partake not at all of the spiral direction of the arteries; consequently, it proceeds, neither from the vagina, or the veins of the uterus, but, from the artery. We are led by no means to consider this discharge as an extravasation or hemorrhage, for on being collected, it will neither coagulate, or separate itself into parts like that of blood, extravasated from any other part of the body. Besides, it partakes not of the character of blood as regard colour, from either the one or other system of vessels, being lighter than venous, and darker than arterial blood. We believe it is all ready separated, and for reasons which we shall hereafter assign, to be a fluid in gurglings, the result of a secretory action

from



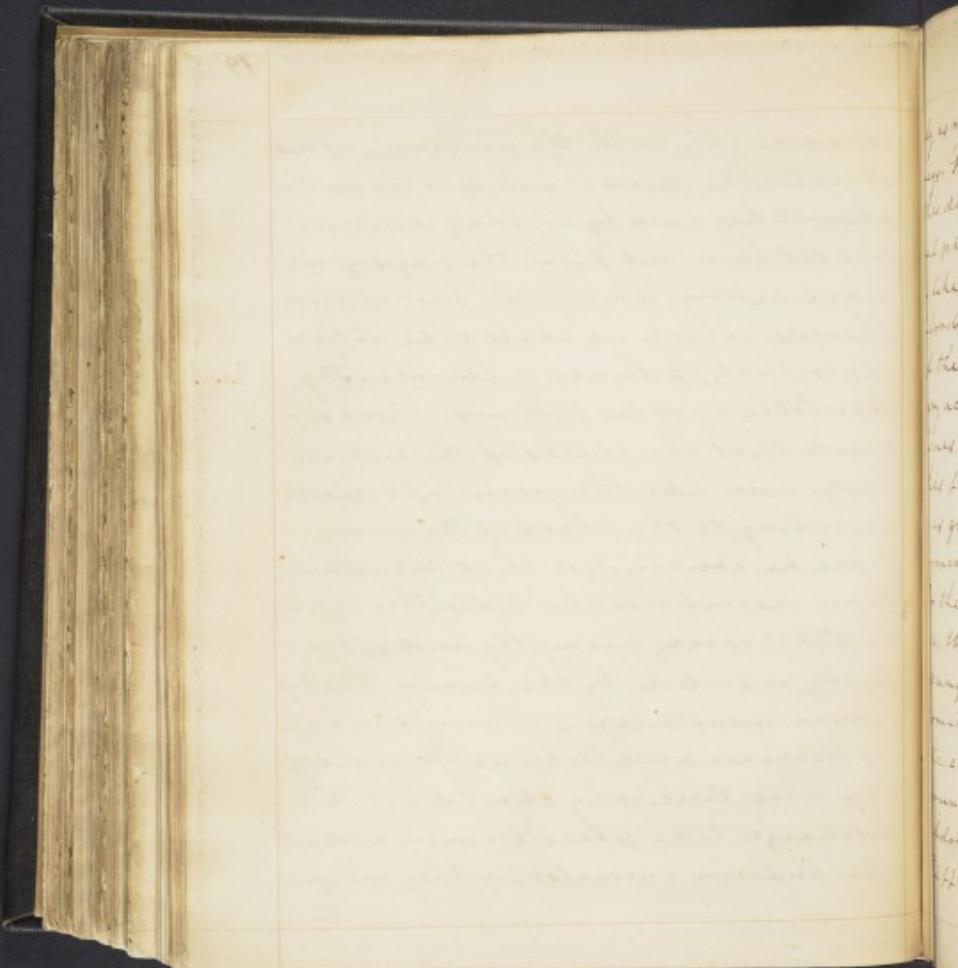
the arteries of the uterus. It seems some what difficult, whom, to assign the honor of having first given publicity to this fact; but, the credit is generally inscribed to Mr. L. Hunter, as being first at least in Great Britain, to treat of the menses under this character.

The causes of menstruation, are divided into those of the efficient and final kind. To dwell on the various and multiplicity which have been erected and put forth, to account for the cause of this phenomenon, would be a task too tedious and unprofitable. Many are consigned to the tomb of silence, and could boast but, of an ephemeral existence; but there are others, that as yet, seem to claim some attention from writers on this subject, not from any merit in themselves, but as being wholly incongruous.



incompatible with the phenomena of menstruation, he deems it a duty to expose their absurdities, and by so doing, endeavour to blot them out from the pages of medical history. Among the first of those theories, which we shall take notice of, is that of lunar influence. By Aristotle and his followers, it was supposed, that the fluids of the human body, were, like the ocean, influenced according to the phases of the moon; hence he concluded that menstruation resembled the tides. This hypothesis is very promptly and effectually refuted, by the known fact of women menstruating at every period of its increase and decline. Moreover, if this were true, why should not this discharge take place in men and all the inferior animals? for they are equal

by



by as much exposed to its nocturnal  
rays. Galen, perceiving the absurdity of  
this doctrine, said it arose from gener-  
al plethora. But in this, we discover  
a like inconsistency; for we know, that  
blood detracted from any other part  
of the system, prior to, or during the  
very act of menstruation, to several  
times the quantity, does not interrupt  
this flow; also, the amount discharged  
is as great from the feeble and infirm  
women, as from the hearty and robust.  
To the foregoing objections may be add-  
ed, the instance of the celebrated  
Hungarian sisters, who, from monastries  
convent were united together; although  
the same blood flowed in each, on ac-  
count of the anastomoses of the  
abdominal blood vessels at the loins,  
<sup>they</sup> differed frequently, both in the

period



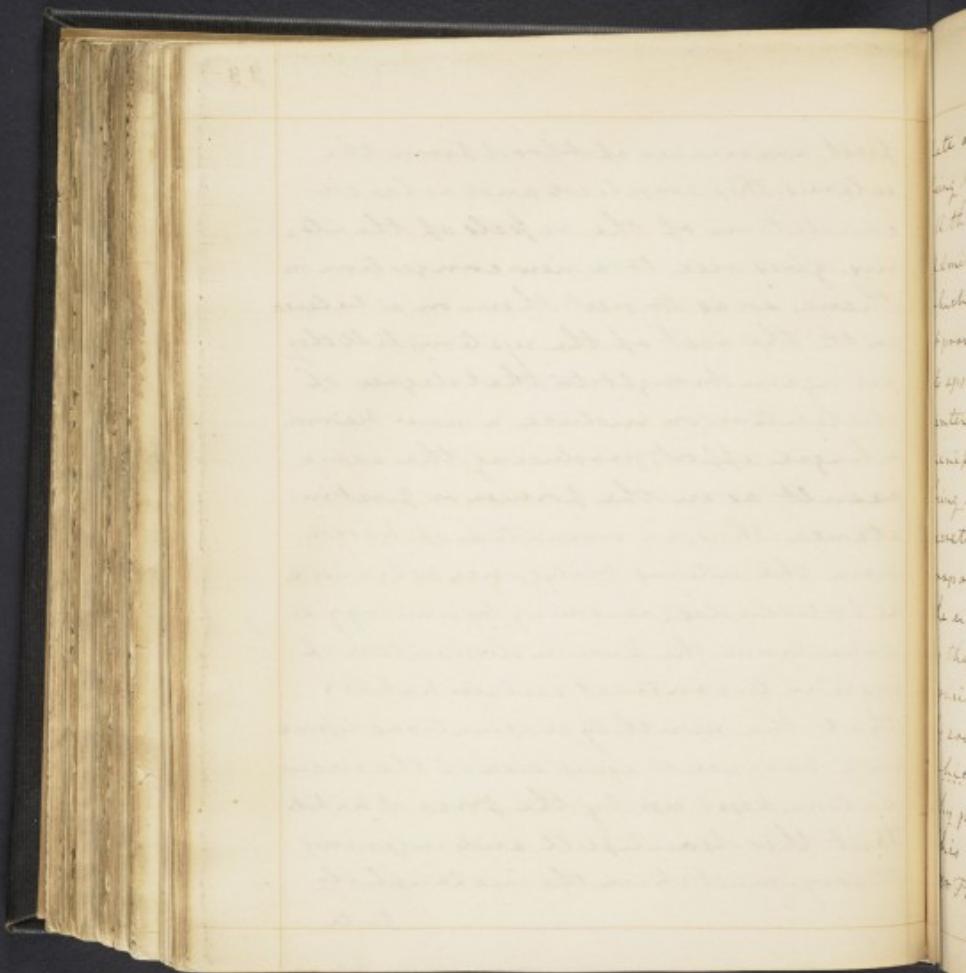
period and quantity of their menstruation. It has also been attributed to fermentation. By the chemists, who farther this theory, it was concluded; that at the time of puberty, there existed in the uterus, a venereal ~~ester~~ or leaven, and, that certain salts were thrown off by the uterine arteries, which produced this fermentation. How their ingenuity, could convert the uterus into a chemical laboratory, we are at a loss to fancy; for certainly no part of that viscus, is as yet discovered that seems calculated for such an office. By Cullem, to whom we owe so much, and whose ingenuity seemed paramount (if possible) with his judgment, menstruation is ascribed to the agency of natural plethora, or topical congestion. His position runs thus, that all the parts

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of the system were regularly, and successively evolved, and that the evolution of each particular part must especially depend upon that plethora or increased congestion in its proper vessels. This, he supposes to be the situation of the uterus at the periods of puberty; and that this congestion, or increased determination of blood to its vessels, either by its mechanical distention, forcing the extremities of the uterine arteries terminating on the surface of its cavity, and thereby causing an effusion of blood there, or, by its presence stimulating the vessels, and exciting in them an hemorrhagic effort which forces their extremities, and consequently producing the same effect. In either way he accounts for the first

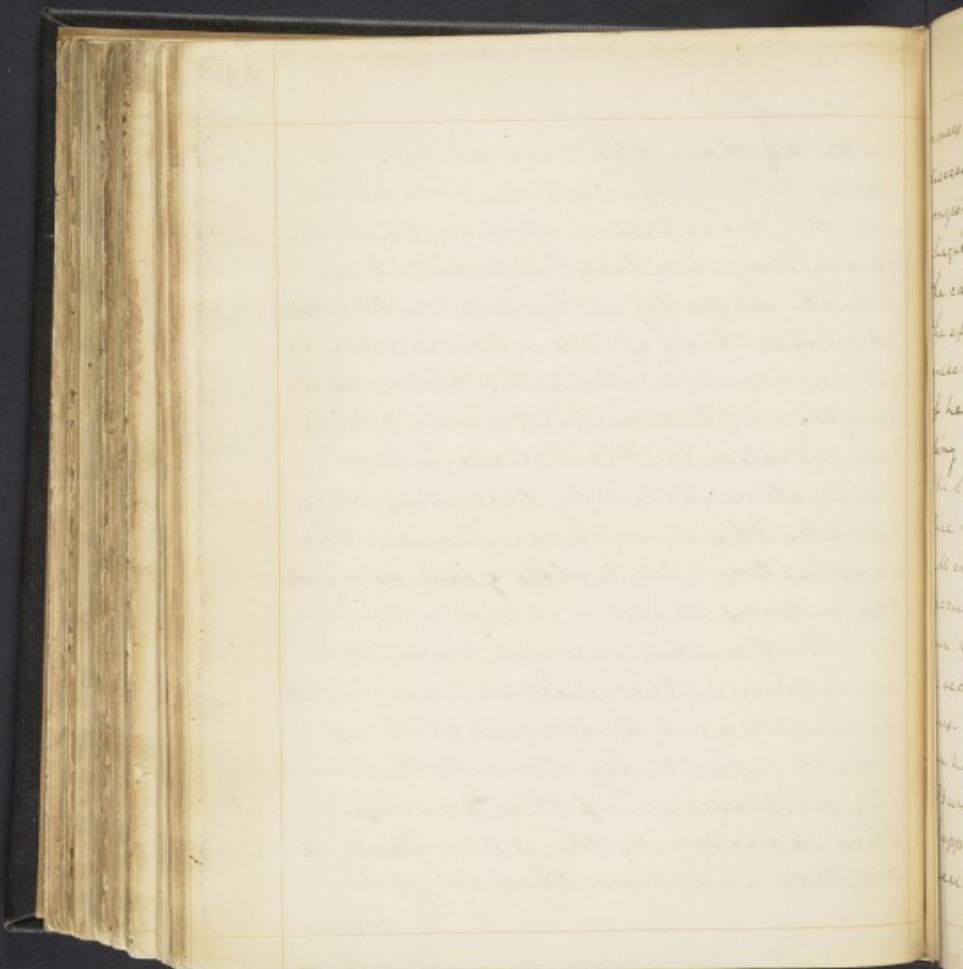
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first appearance of blood from the uterus. This emptied and relaxed condition of the vessels of the uterus, gives rise to a new congestion in them, so as to put them on a balance with the rest of the system, till they are again brought to that degree of distension, or, induce a new hemorrhagic effort, producing the same result as in the former or first instance. Thus an evacuation of blood from the uterus being once established, he concludes, (reasoning by analogy alone, from the known dissipation of system to contract certain habits,) that the monthly evacuations depend on a balance or equipoise of the circulation, kept up by the force of habit. But this beautifull and ingenious theory, must share the melancholy fate



Late of those, that preceded it; as being totally inadequate to explain all the phenomena of menstruation. Admitting this local determination, which evidently is the fact, what does it prove? "Every gland when excited by its appropriate stimulus, becomes a center of fluxion. This is very fairly manifested, in the testicle, which, being stimulated by lascivious ideas, secretes the semen masculinum. The proposition also holds good as regards the uterus; it also is called into action by the stimulus derived from the ovaria; upon the existence, and perfect & sound and developed state of which, essentially depends the healthy performance of this function." This is proven by the experiments of Mr Pott, and from the fact of the

menstru-



menses, being retained, or suppressed in diseased states of these organs. If this congestion of the vessels, or the hemorrhage induced by the distention, is the cause of menstruation; evidently, the effused fluid should and would present all the characteristic marks of hemorrhagic blood. But this we deny for reasons already assigned. The last theory, that we shall take notice of, to account for the cause of this all important function, and in the accuracy of which we acknowledge our belief; is that, of the existence of a secretory action resident in the uterus. In confirmation of this opinion, we have the united voice of Drs Denman, Burns, Lamey, Chapman and Davies. Supported by such authority, I do not hesitate a moment, to repose with confidence

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confidence in the adopted position. But to give further validity, than the mere verbal citation of names, altho' they stand among the brightest satellites of the medical world, we will briefly cite some of the leading arguments adduced in its support. 1. That the uterus in its villous and muscular structure resembles a gland, being equally liable to scirrhous or cancer. 2. By the arrangement of its vessels, it is evidently designed that the circulation should be impeded for the purpose of secretion. The arteries are not only exceedingly convoluted, but are larger, and with thinner coats than their corresponding veins. Haller also says, that the blood is brought in larger quantities to the womb, and more quickly through its lax and ample arteries, and returns with diffi-

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ity, from the rigidity and narrowness of the veins. 35 That in many of the inferior animals, during the season of venereal incalcescence, there is an uterine effusion, undoubtedly a secretion, which seems to answer the same end as menstruation; this also differs from the menstrual blood, as regards colour not assuming its red hue. If this venereal desire becomes violently exasperated from confinement, or other causes, the discharge assumes a sanguineous appearance; this frequently obtains in the bitch, kept from the male. And lastly, that the menses are a fluid sui generis, or, at least differing very essentially from blood, by possessing neither its colour, odour, or coagulability, and on chemical analysis presenting different results. If this be not truly the efficient and physical cause of menstruation, its influence has at least



least, divested much of empiricism from the treatment, of the <sup>the</sup> diseased actions of this function, and has enabled the practitioner, to direct with much <sup>more</sup> precision, and prospect of success, those articles of the Mat. Med. called emmenagogues which have been so much abused and stigmatized by preceding generations. The ultimate, or final end of menstruation, is, to give to the uterus, an exhalation to conception. Little, or no diversity of sentiment now exist as respects the accuracy of this opinion; it may, it may be called a fact. Under such circumstances, we deem it wholly unnecessary, to enter into any argument or statement of facts in its support. We shall therefore conclude finally; hoping that we have done the subject justice; and that, if it meets not decided approbation, it will at least answer the end for which it is destined.

Finis.

